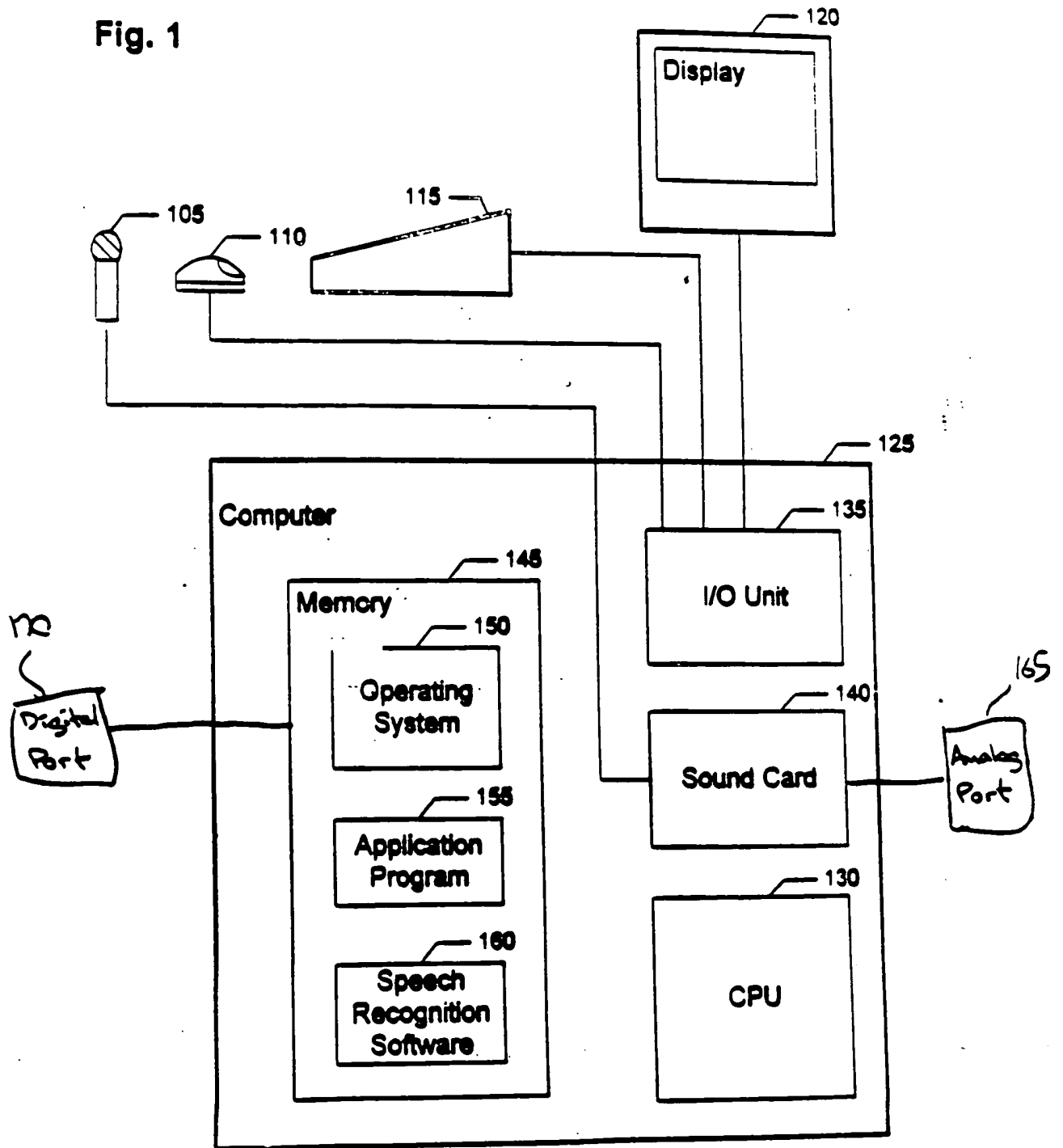


Fig. 1



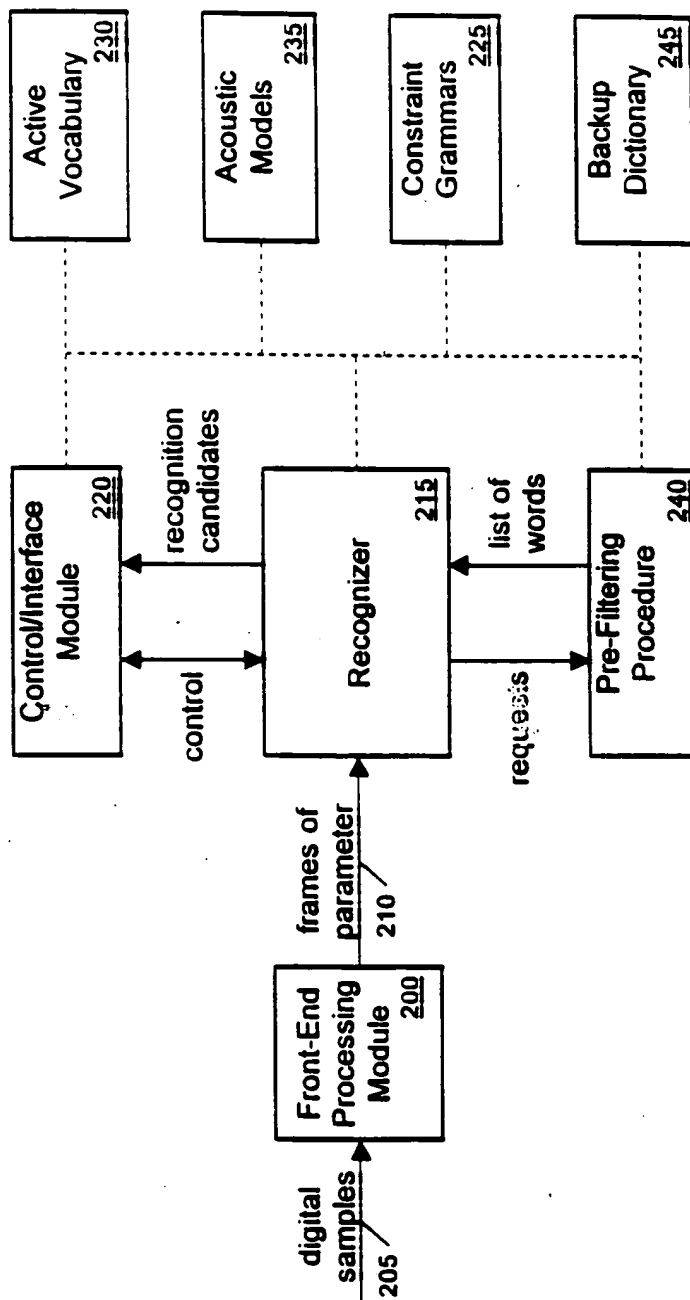


FIG. 2

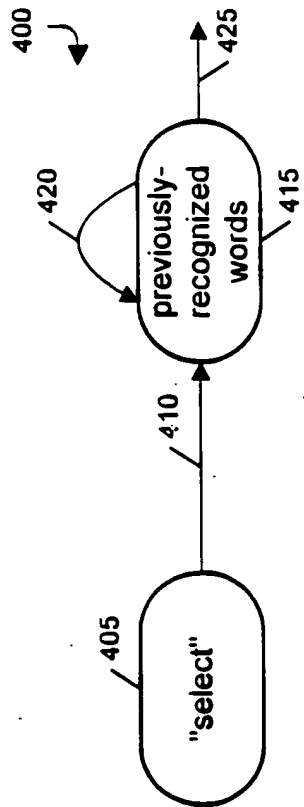


Fig. 3A

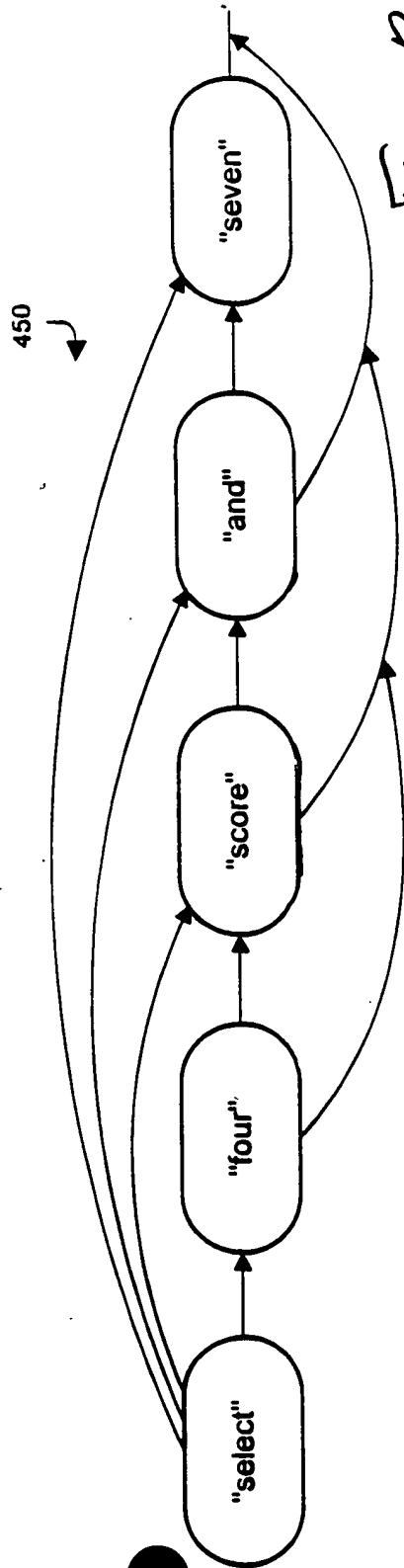
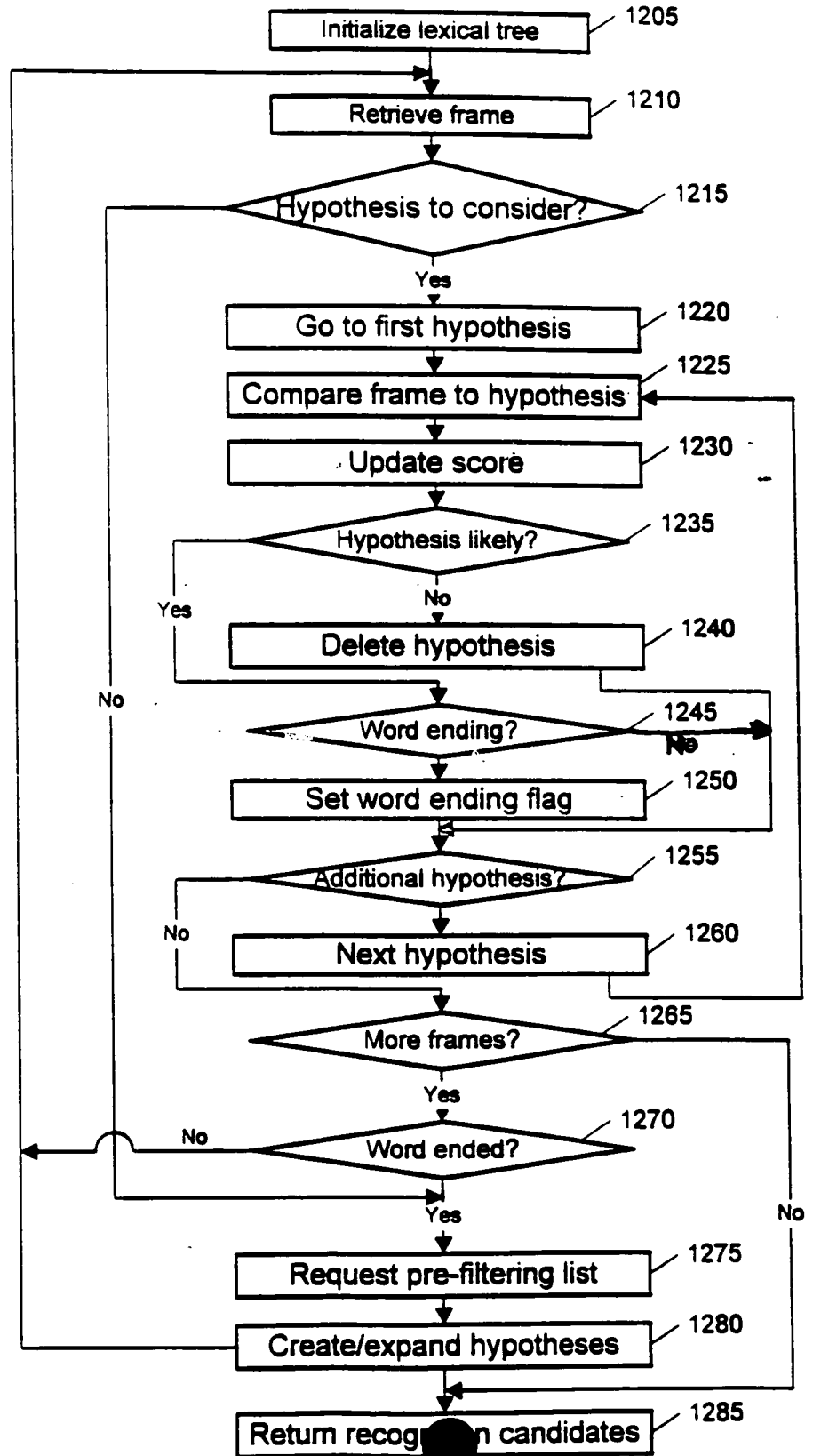


Fig. 3B

FIG. 4



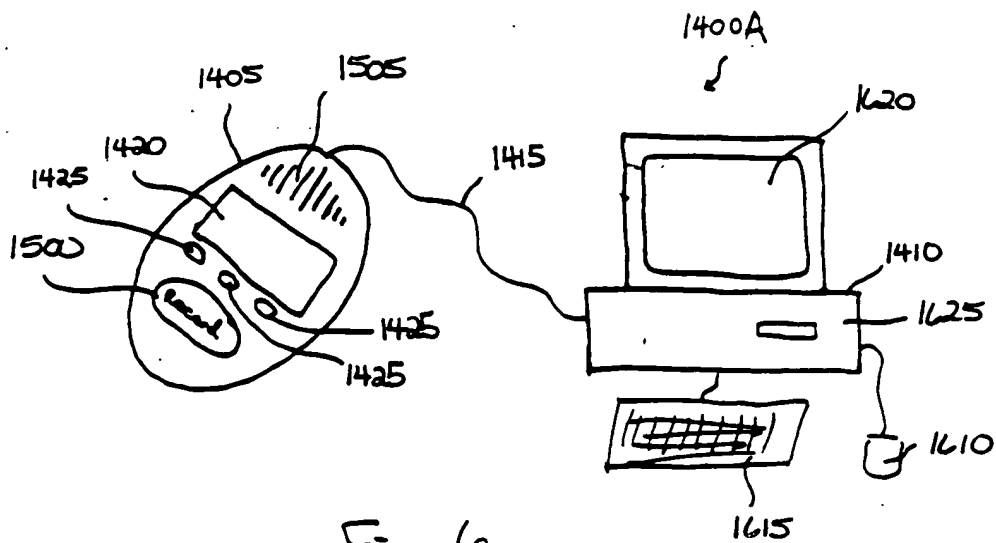


Fig. 6

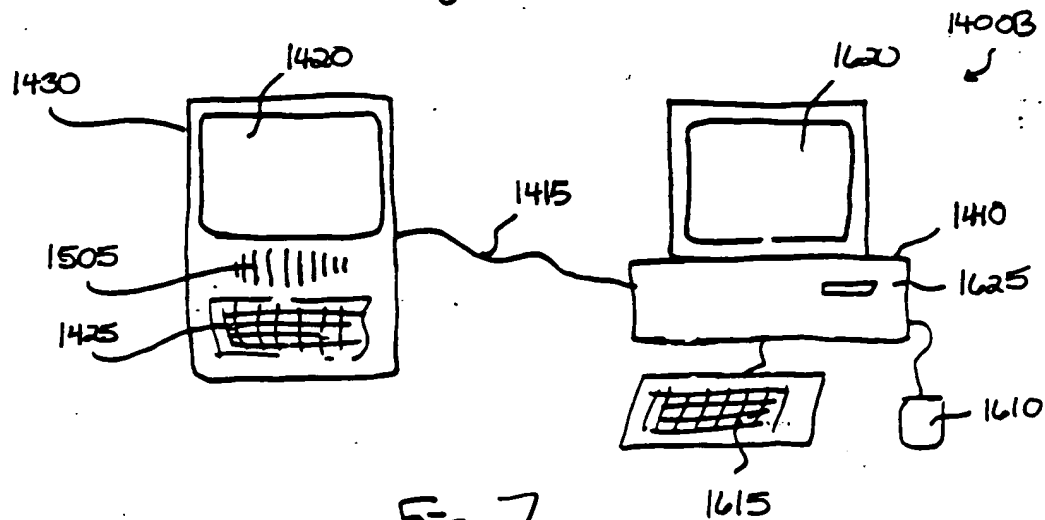


Fig. 7

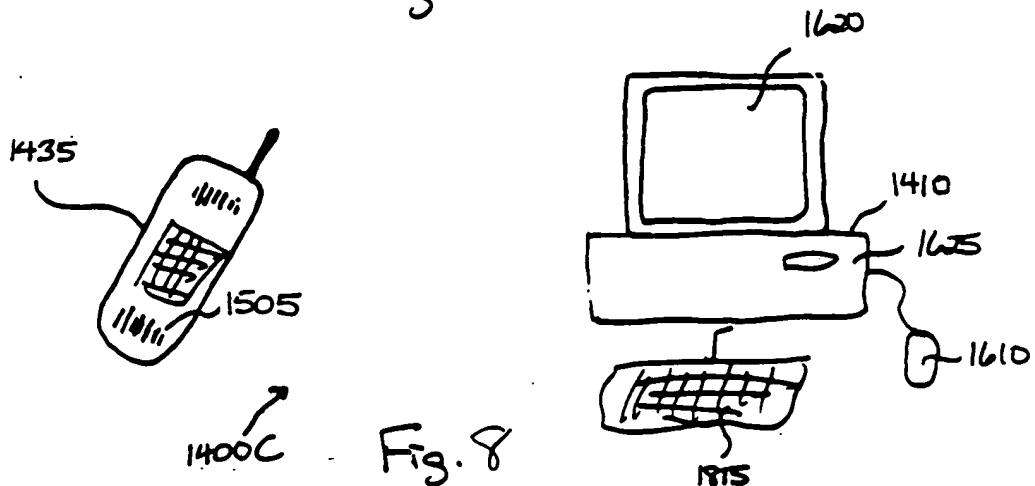
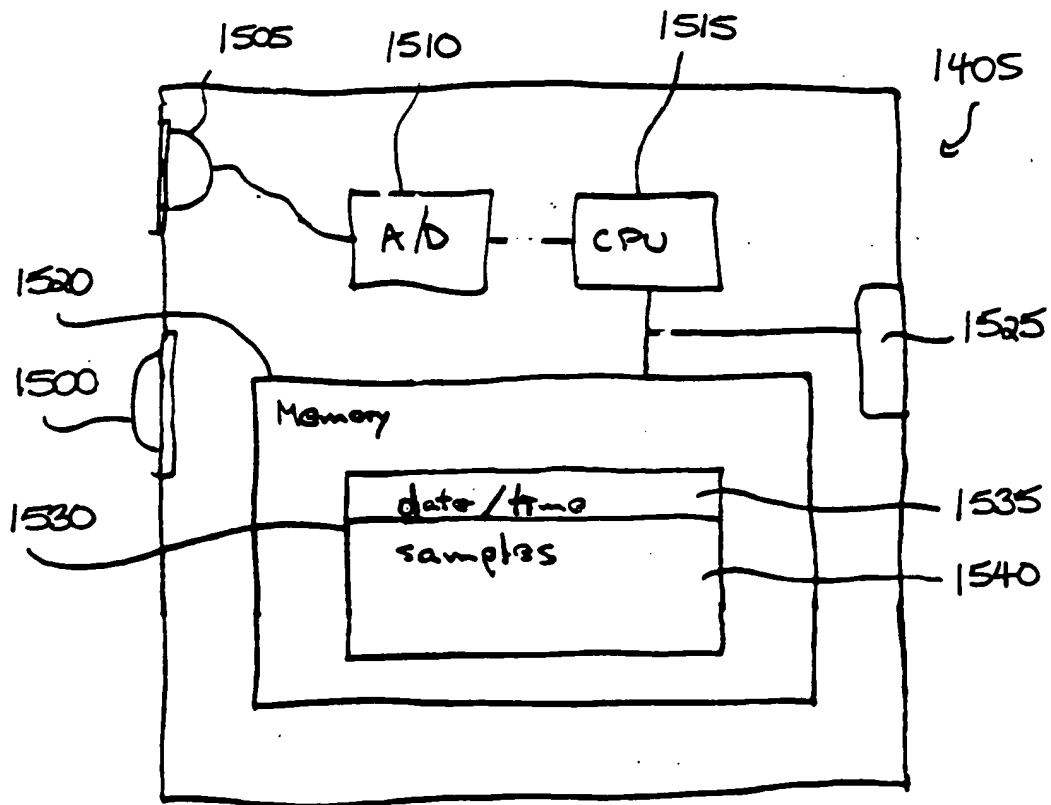
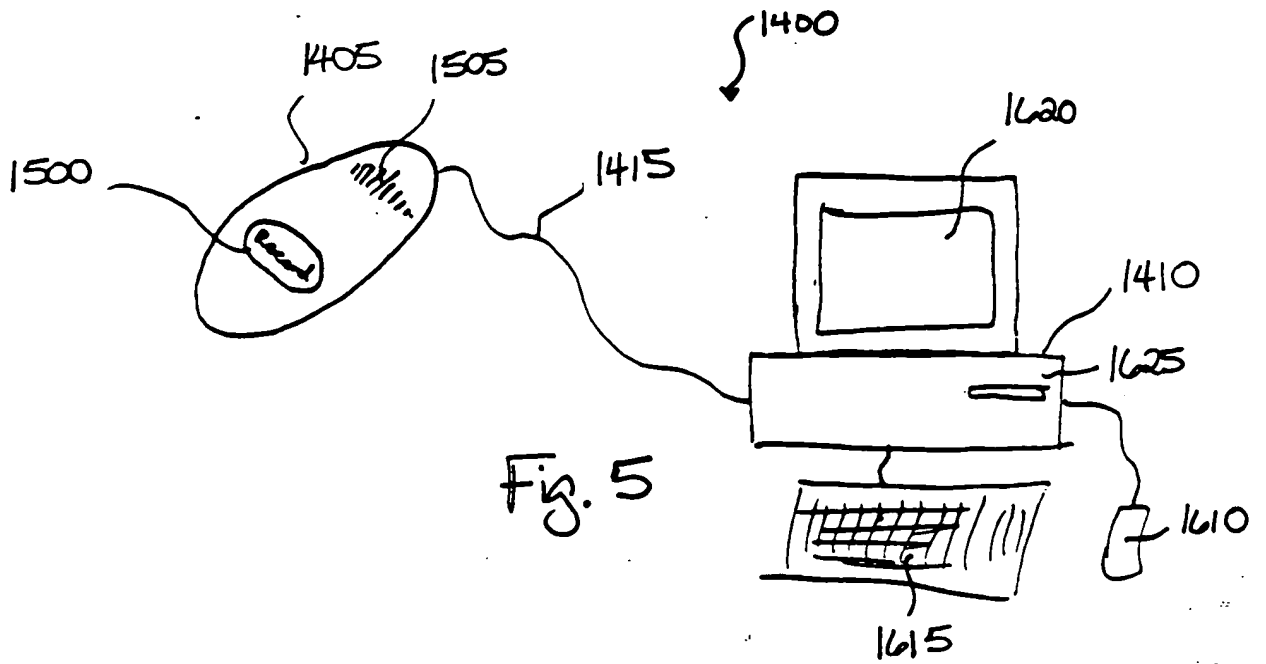


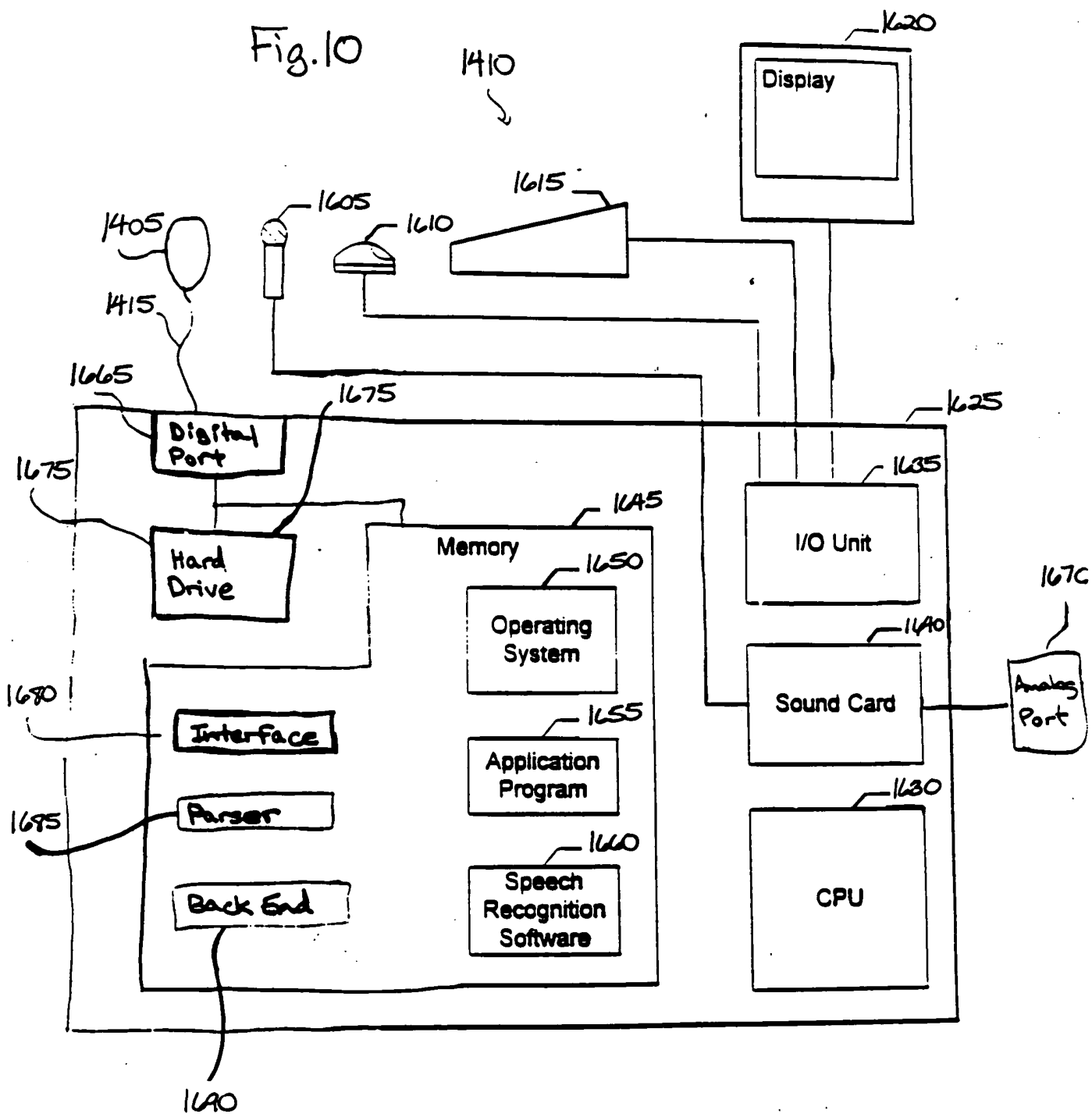
Fig. 8

0945769.05001



09845769.050204
T02050.69254860

Fig. 10



"let's recognize speech"

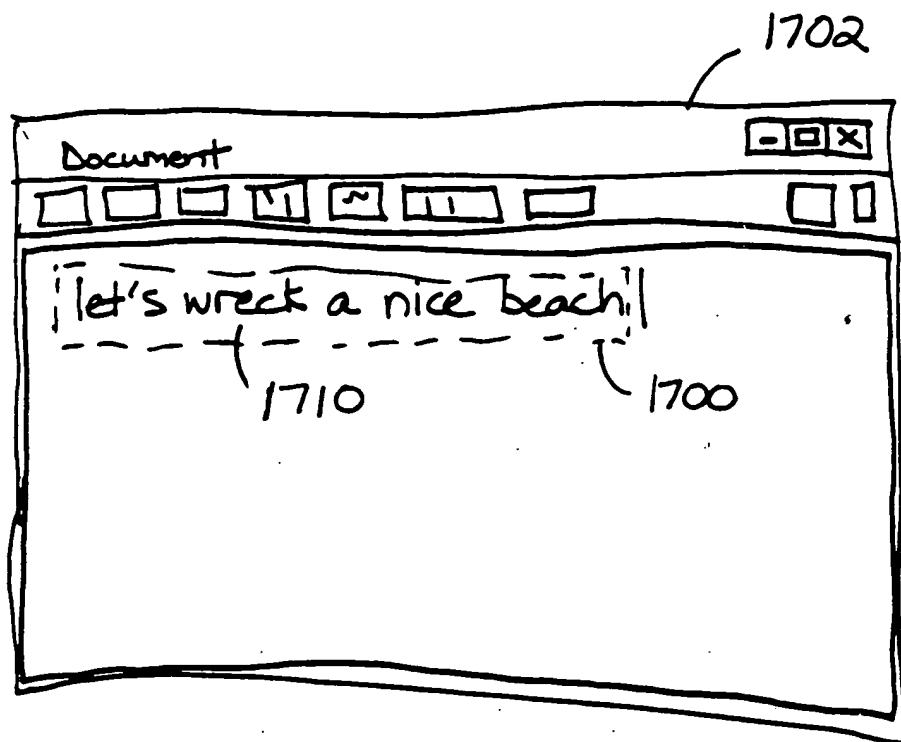


Fig. 11A

select "wreck"

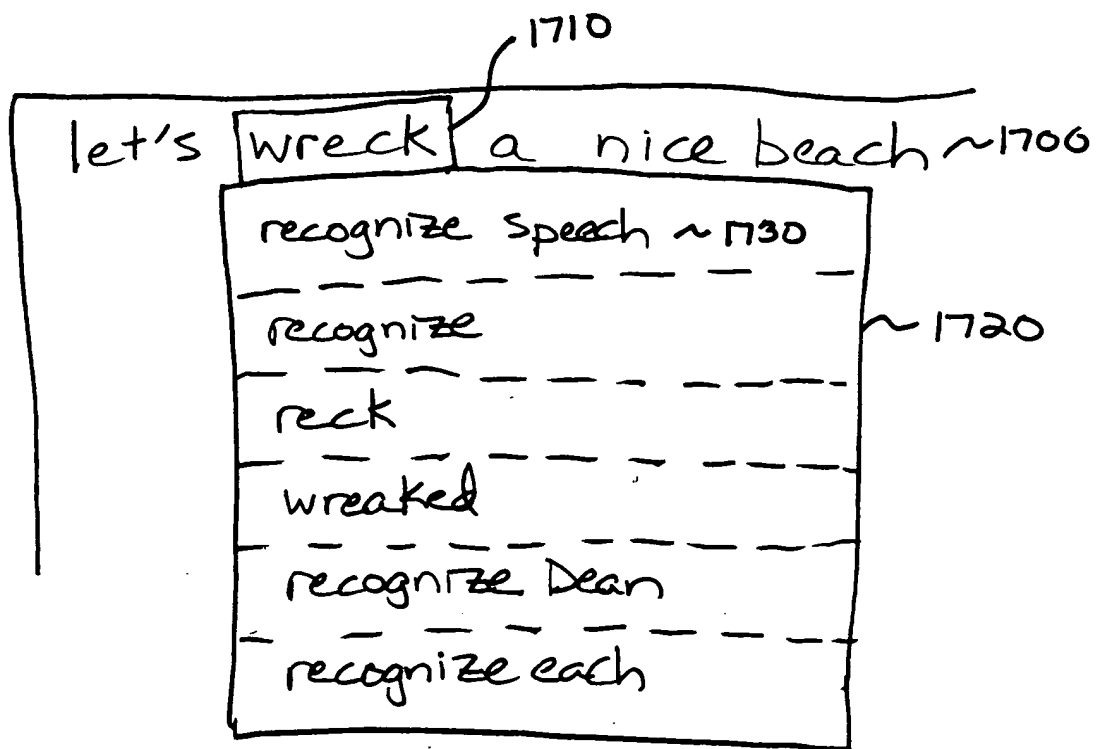


Fig. 11C

select "wreck"

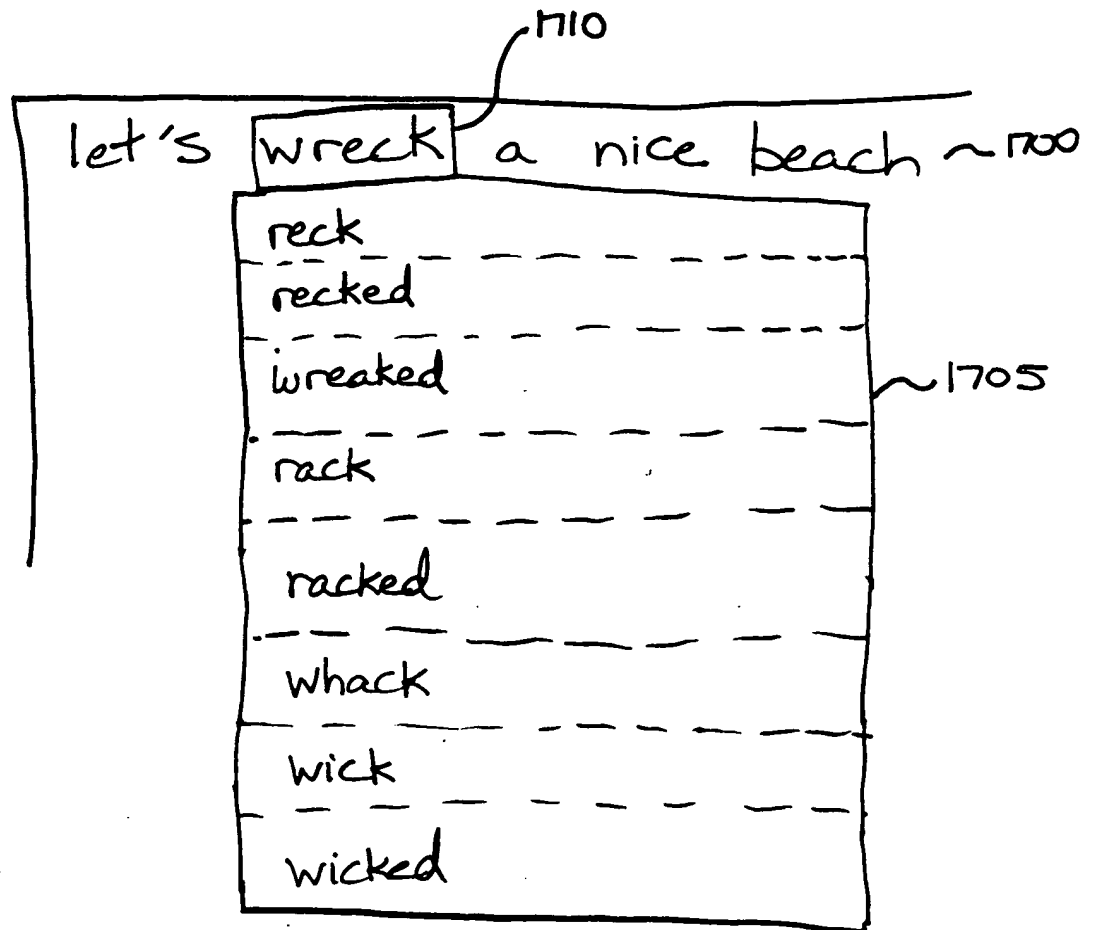


Fig. 11B

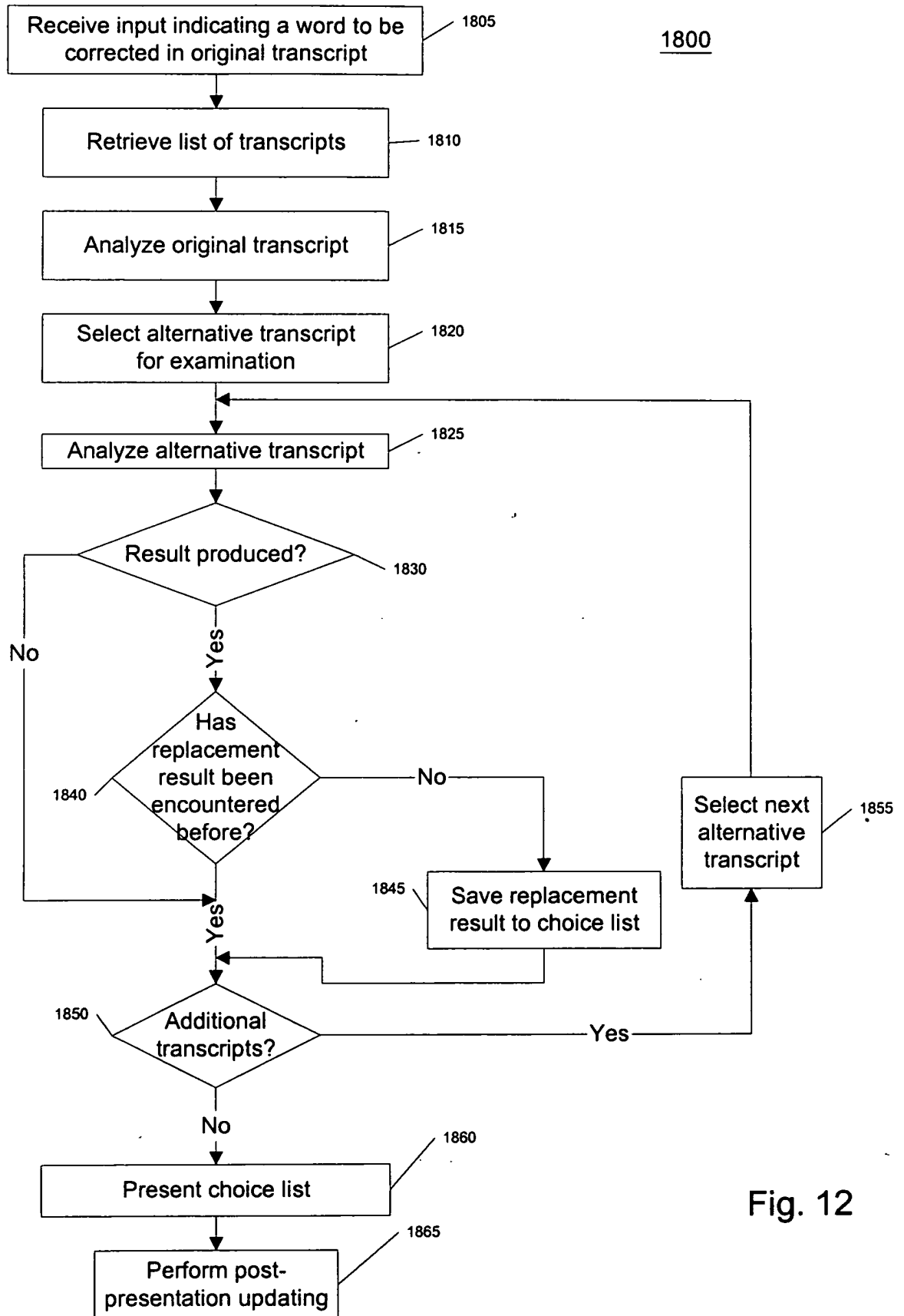


Fig. 12

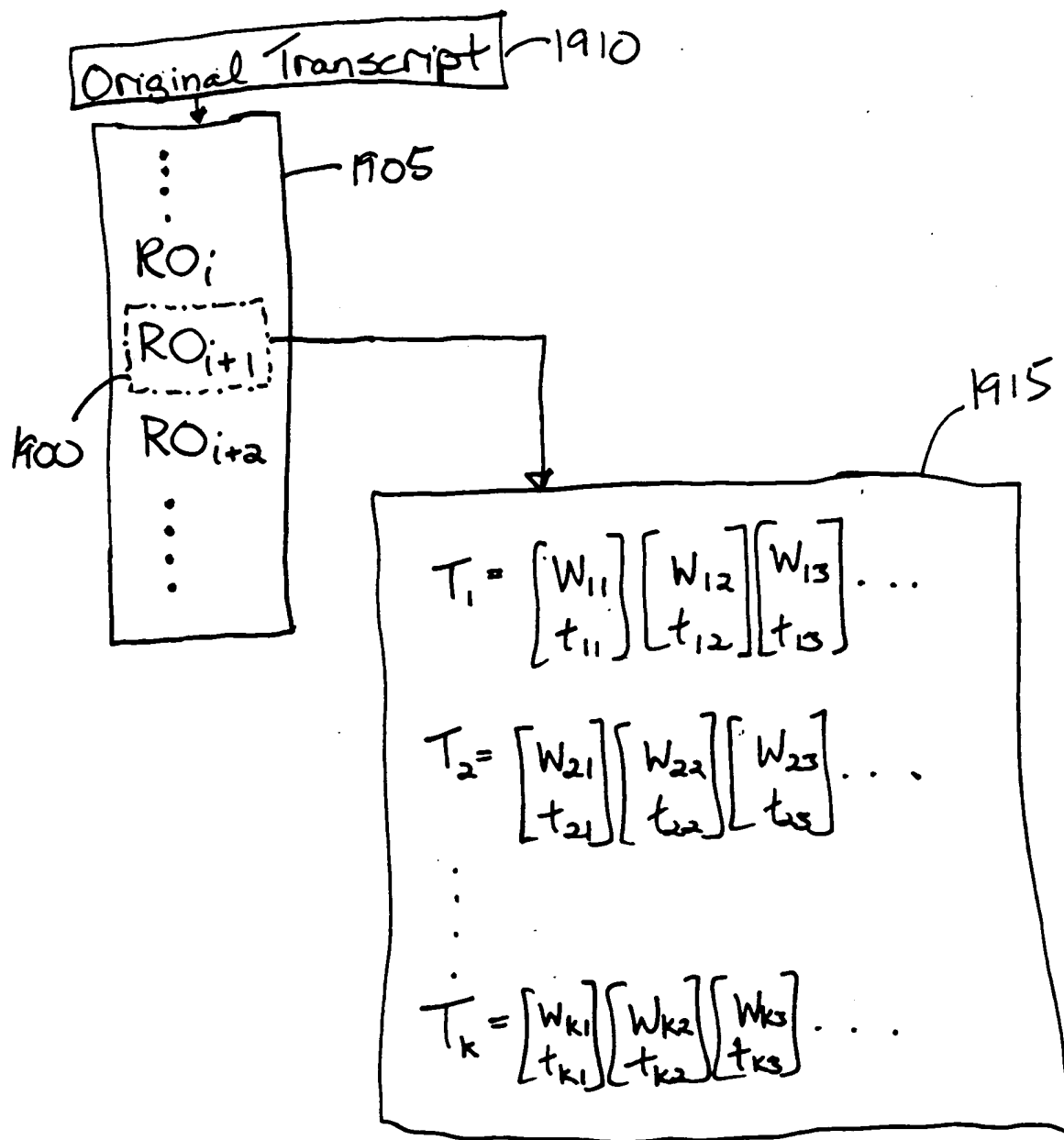


Fig. 13

09045769.050201

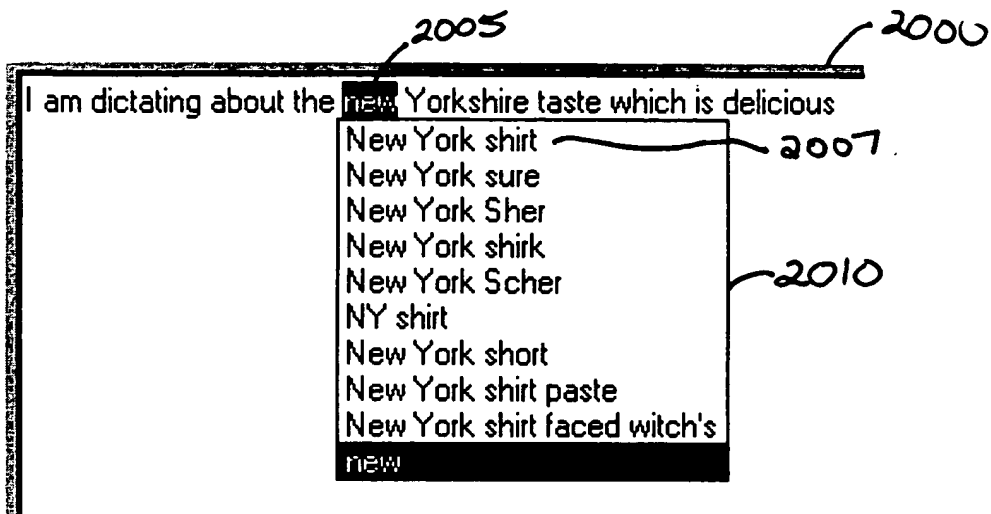


Fig. 14

Diagram illustrating a table (2005) with two rows of data. The first row (2100) contains the words "I", "am", "dictating", "about", "the", "new", "Yorkshire", "taste", "which", "is", "delicious" with corresponding numerical values (199, 458, 697, 1295, 1733, 1892, 2131, 2729, 3287, 3486, 3645). The second row (2110) contains the words "I", "am", "dictating", "about", "the", "New York", "shirt", "taste", "which", "is", "delicious" with corresponding numerical values (199, 458, 697, 1295, 1733, 1892, 2490, 2809, 3287, 3486, 3645). A label 2120 points to the second row. A label 2105 points to the word "New York" in the second row. A label 2115 points to the word "shirt" in the second row.

| | | | | | | | | | | |
|-----|-----|-----------|-------|------|----------|-----------|-------|-------|------|-----------|
| I | am | dictating | about | the | new | Yorkshire | taste | which | is | delicious |
| 199 | 458 | 697 | 1295 | 1733 | 1892 | 2131 | 2729 | 3287 | 3486 | 3645 |
| I | am | dictating | about | the | New York | shirt | taste | which | is | delicious |
| 199 | 458 | 697 | 1295 | 1733 | 1892 | 2490 | 2809 | 3287 | 3486 | 3645 |

Fig. 15

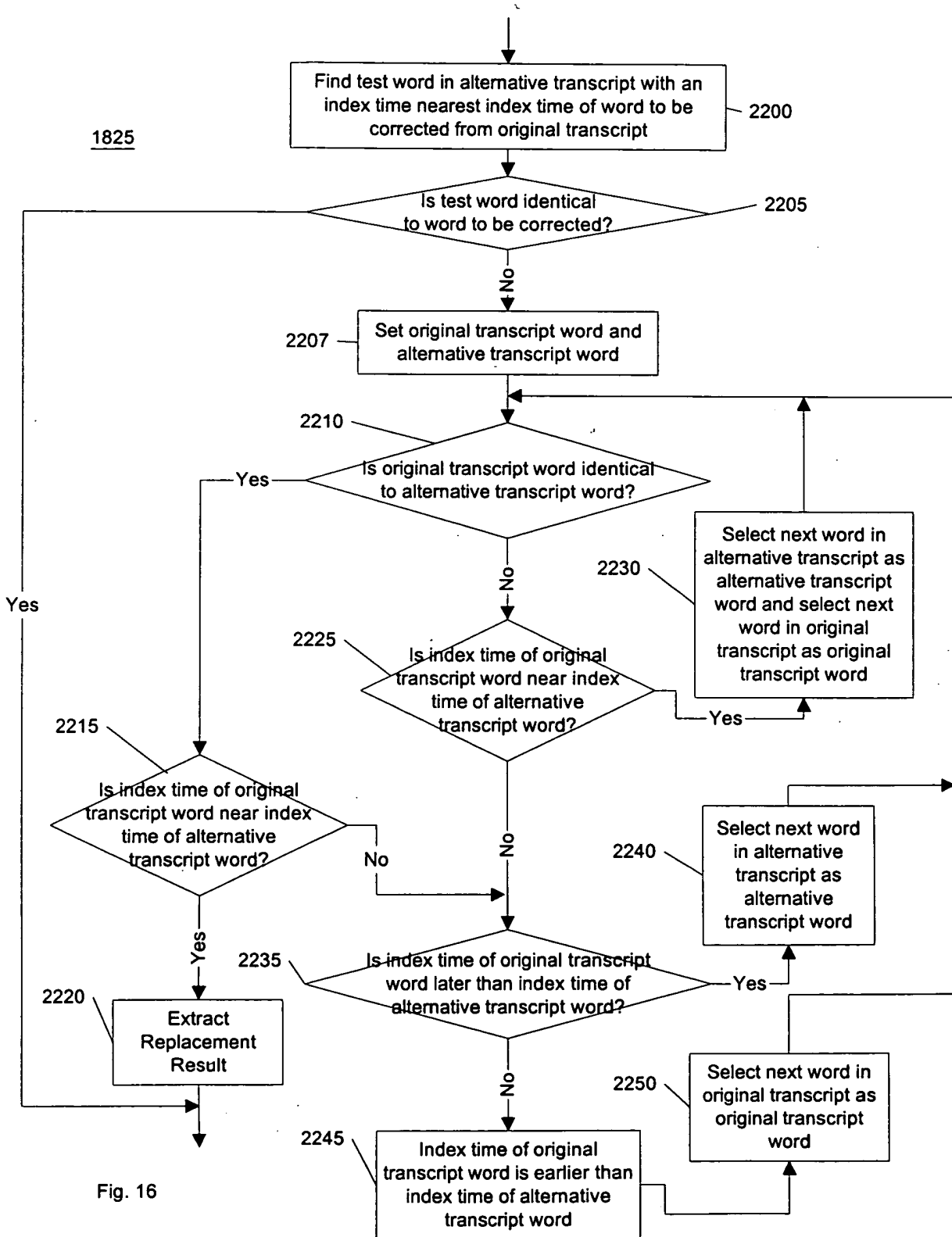


Fig. 16

2300
I am dictating about the new Yorkshire taste which is delicious
thee
the 2305

Fig. 17

2400
I am dictating about the new Yorkshire taste which is delicious
paste
faced witch's
case to
taste 2405

Fig. 18

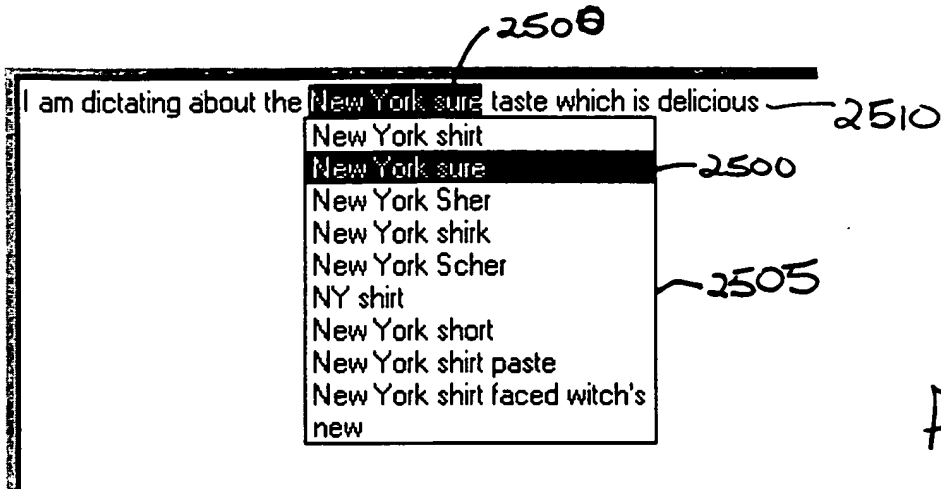


Fig. 19A

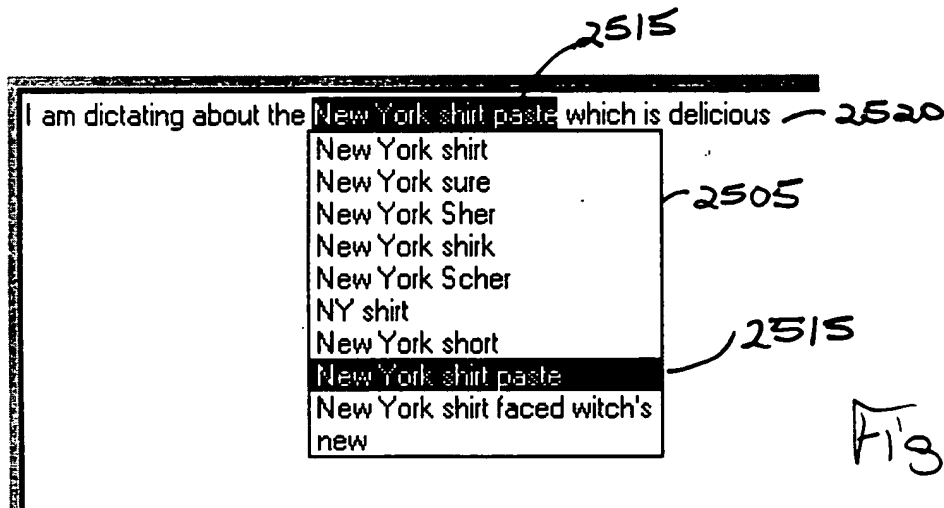


Fig. 19B

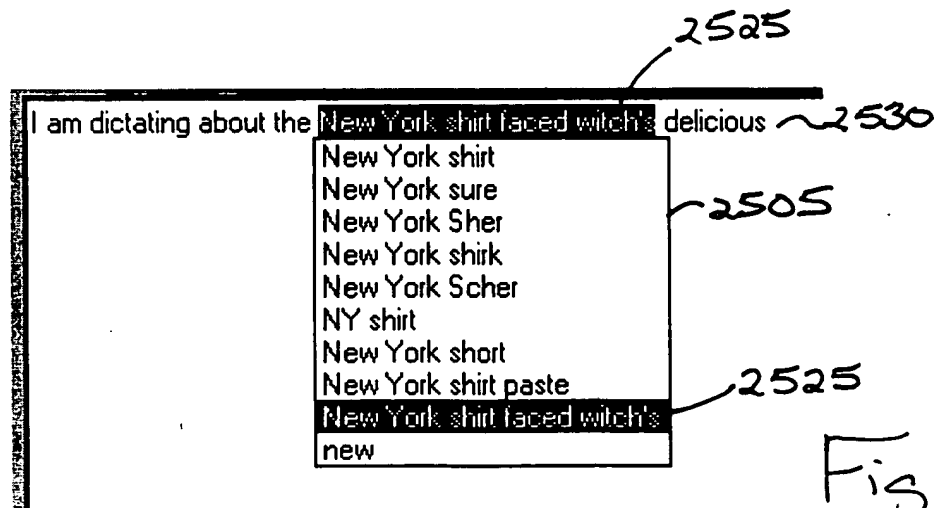
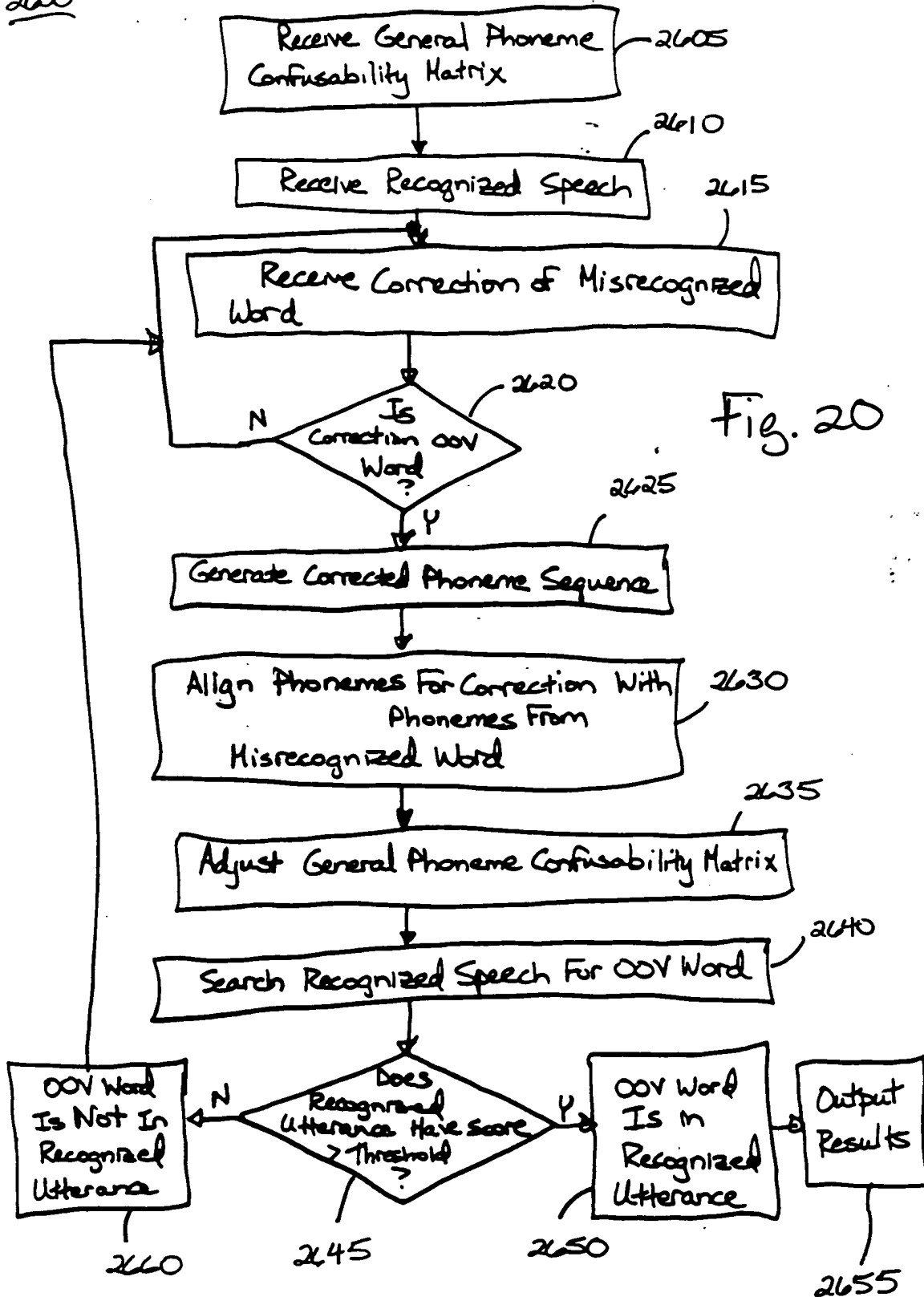


Fig. 19C

2600



2700

EXAMPLE OF PHONEME CONFUSABILITY MATRIX THAT INCLUDES A SUBSET OF ALL PHONEMES

| | | w | u | t | i | z | l | l | f | 6 | n | s | q | r | ~ | s | k | e |
|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 38 | 38 | 14 | 16 | 10 | 19 | 17 | 16 | 29 | 18 | 10 | 15 | 38 | 10 | 16 | 16 | 18 | 19 | 19 |
| 21 | 21 | 0 | 38 | 38 | 38 | 38 | 22 | 38 | 33 | 38 | 38 | 38 | 38 | 26 | 38 | 38 | 38 | 38 |
| 15 | 15 | 38 | 0 | 38 | 18 | 38 | 38 | 16 | 38 | 17 | 38 | 38 | 15 | 34 | 38 | 38 | 38 | 17 |
| 7 | 7 | 38 | 38 | 0 | 38 | 38 | 38 | 38 | 22 | 38 | 22 | 38 | 38 | 38 | 38 | 38 | 19 | 38 |
| 15 | 15 | 38 | 23 | 38 | 0 | 38 | 38 | 32 | 38 | 10 | 38 | 29 | 15 | 37 | 27 | 38 | 38 | 18 |
| 15 | 15 | 38 | 33 | 38 | 38 | 0 | 31 | 38 | 30 | 38 | 38 | 38 | 38 | 38 | 38 | 15 | 38 | 38 |
| 15 | 15 | 17 | 30 | 38 | 38 | 38 | 0 | 32 | 38 | 38 | 34 | 38 | 38 | 34 | 38 | 38 | 38 | 38 |
| 35 | 35 | 38 | 24 | 38 | 33 | 38 | 38 | 0 | 38 | 32 | 38 | 38 | 38 | 31 | 30 | 38 | 38 | 25 |
| 18 | 18 | 31 | 38 | 38 | 38 | 26 | 34 | 32 | 0 | 38 | 38 | 38 | 38 | 34 | 38 | 27 | 32 | 38 |
| 14 | 14 | 38 | 16 | 38 | 11 | 38 | 34 | 29 | 38 | 1 | 38 | 38 | 17 | 33 | 14 | 38 | 38 | 21 |
| 11 | 11 | 38 | 38 | 38 | 38 | 38 | 26 | 38 | 38 | 38 | 0 | 38 | 38 | 29 | 12 | 38 | 38 | 38 |
| 30 | 30 | 38 | 38 | 38 | 38 | 29 | 38 | 38 | 38 | 38 | 38 | 0 | 38 | 37 | 38 | 24 | 38 | 38 |
| 20 | 20 | 38 | 29 | 38 | 25 | 38 | 38 | 38 | 38 | 26 | 38 | 38 | 1 | 33 | 33 | 38 | 38 | 30 |
| 16 | 16 | 21 | 38 | 38 | 38 | 38 | 28 | 38 | 38 | 38 | 31 | 38 | 38 | 0 | 33 | 38 | 38 | 38 |
| 20 | 20 | 38 | 26 | 38 | 22 | 38 | 38 | 38 | 38 | 25 | 21 | 38 | 38 | 34 | 0 | 38 | 38 | 22 |
| 11 | 11 | 38 | 38 | 38 | 27 | 10 | 38 | 38 | 38 | 38 | 38 | 23 | 23 | 38 | 38 | 0 | 38 | 38 |
| 13 | 13 | 38 | 38 | 38 | 33 | 38 | 38 | 32 | 25 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 0 | 38 |
| 26 | 26 | 38 | 17 | 38 | 15 | 38 | 38 | 18 | 38 | 21 | 38 | 38 | 23 | 38 | 17 | 38 | 38 | 0 |

Fig. 21

09845769-050201

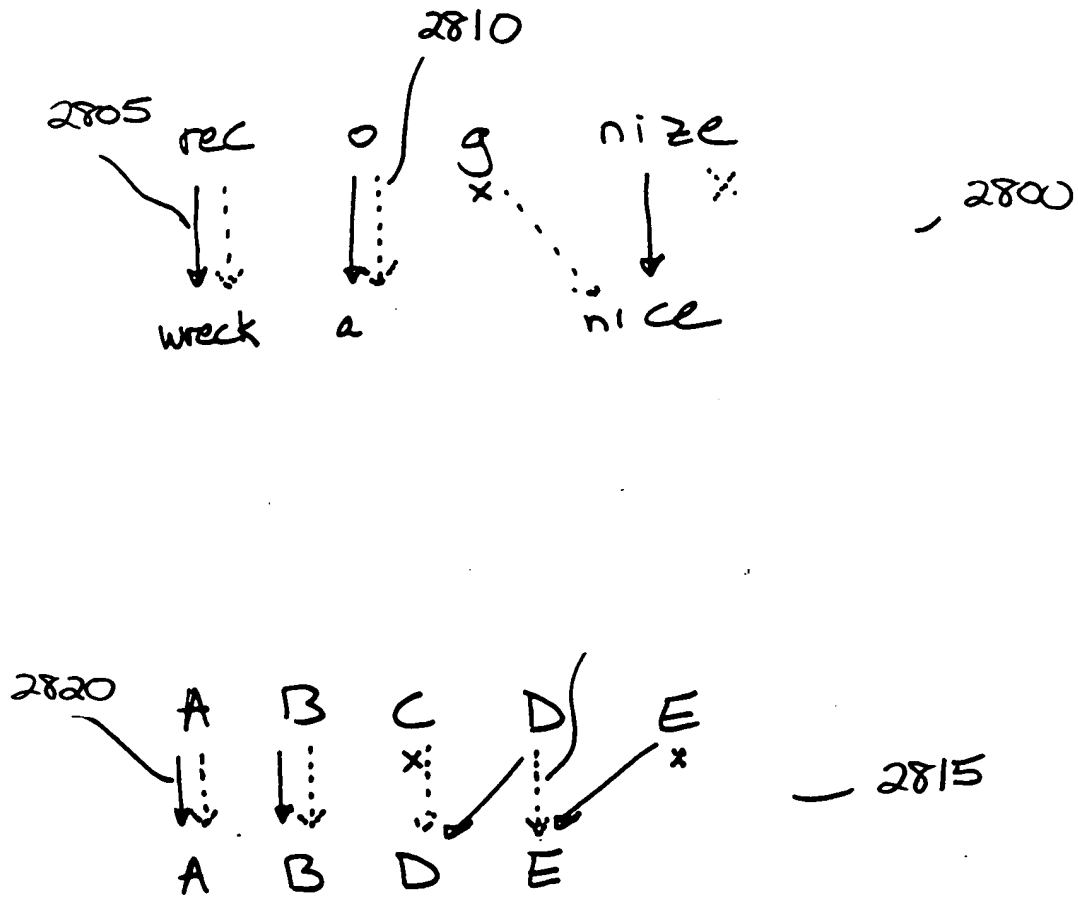
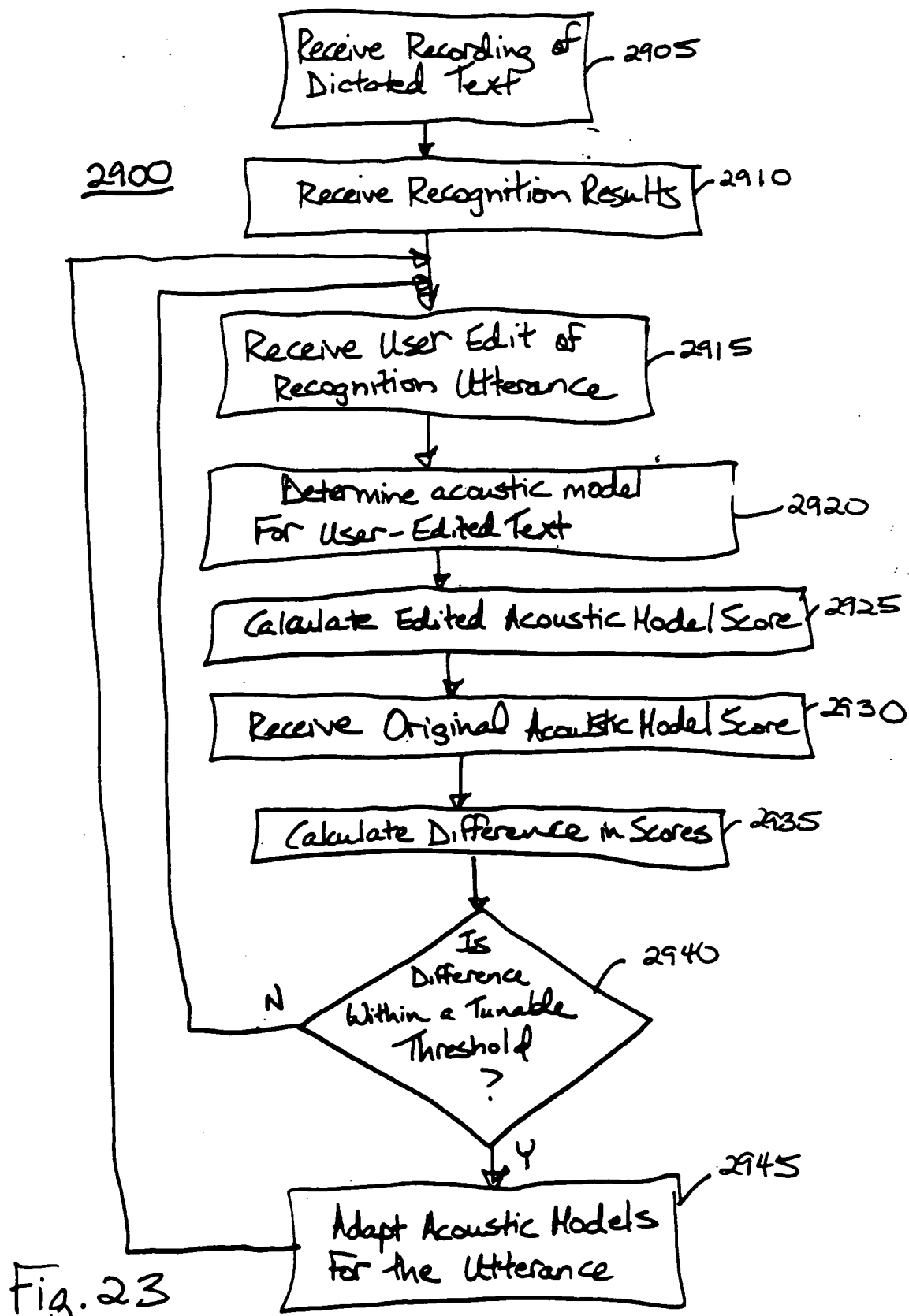


Fig. 22

09045769 050601



Hacking recognized transcript (vs. LVCSR)

Cumulative fraction

Score difference

correct
delete
insert
substit

3010
3020
3025
3030

Fig. 24A

FOI2050" 69254860

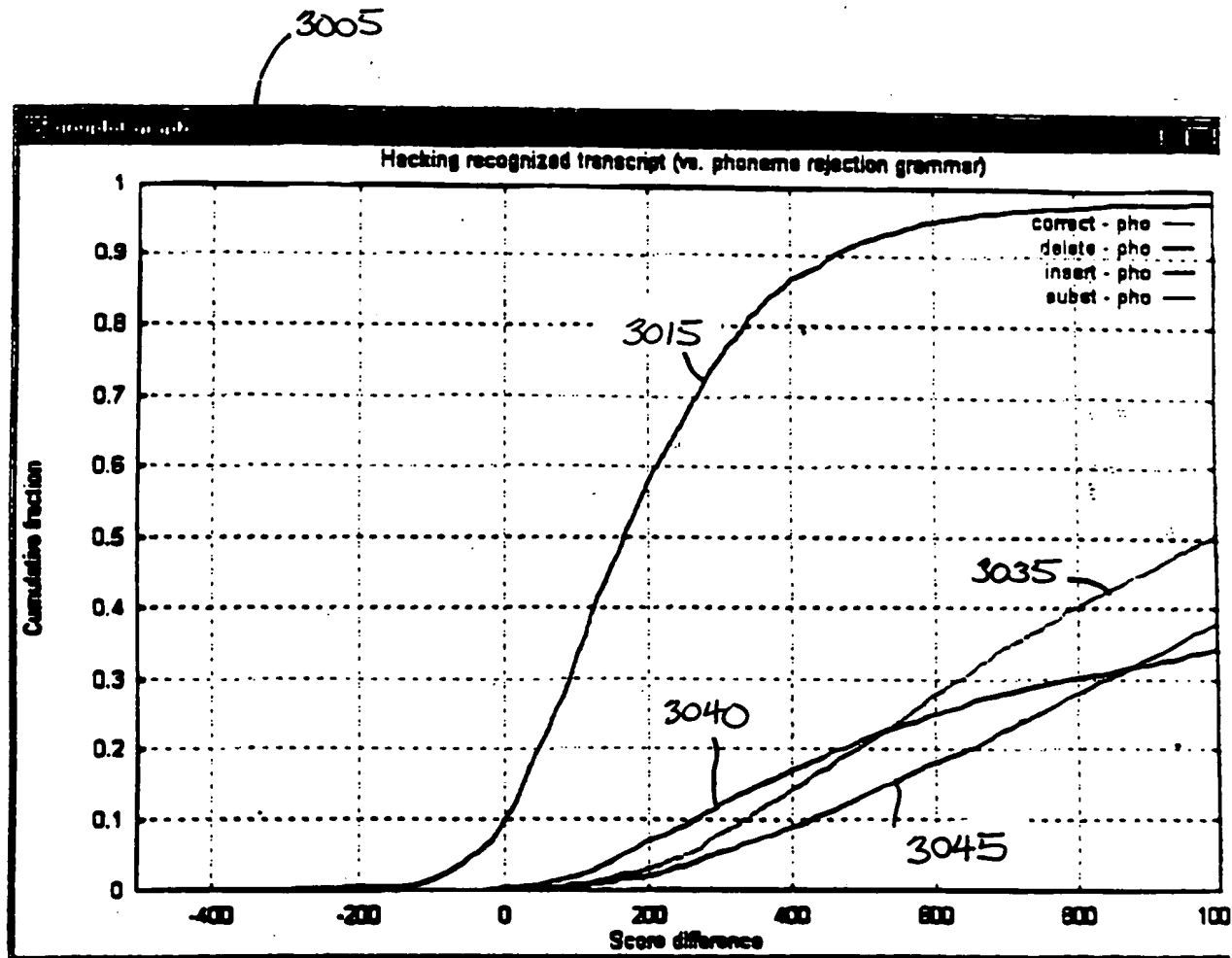


Fig. 24B

09845769-050201

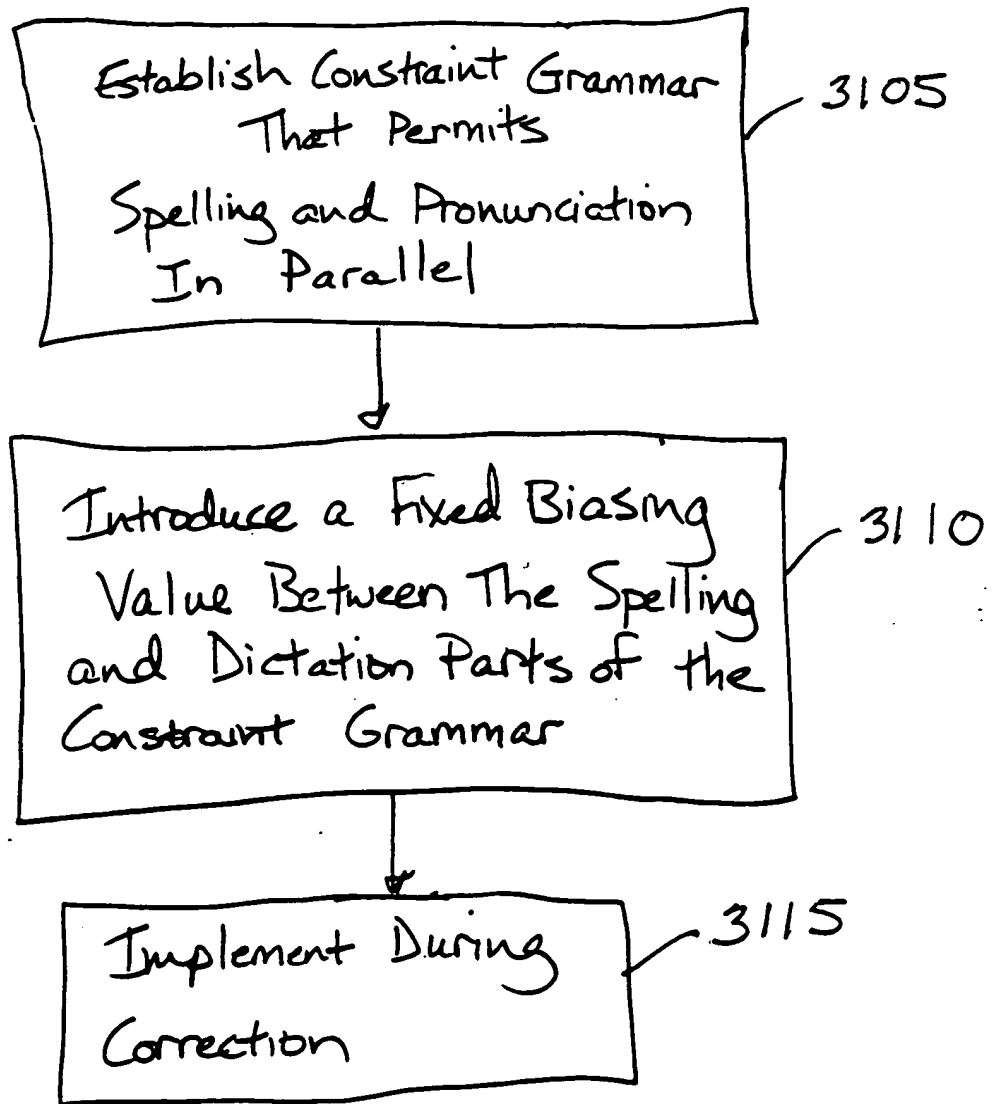


Fig. 25

3100

Fig. 26

3200

